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Subject: Completely omit NaNs from line plot  
Posted by [laura.hike](#) on Wed, 25 May 2016 00:19:38 GMT  
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Hi,

I have some solar irradiance data. All the nighttime values are set to NaN so that they won't be used in any calculations. I would like to plot a section of the time series but not include any of the points that are NaNs. That is, normally plot won't make any mark for the time when there is a NaN, but I want to completely skip these points because they just make the plot twice as long as necessary. Is there any way to do this other than creating a new array without those points?

Thanks,

Laura

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Subject: Re: Completely omit NaNs from line plot  
Posted by on Wed, 25 May 2016 08:05:31 GMT  
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Den onsdag 25 maj 2016 kl. 02:19:40 UTC+2 skrev laura...@gmail.com:

> Hi,

>

> I have some solar irradiance data. All the nighttime values are set to NaN so that they won't be used in any calculations. I would like to plot a section of the time series but not include any of the points that are NaNs. That is, normally plot won't make any mark for the time when there is a NaN, but I want to completely skip these points because they just make the plot twice as long as necessary. Is there any way to do this other than creating a new array without those points?

>

> Thanks,

>

> Laura

If you plot with time on the horizontal axis, the plot will be the same length whether you remove the NaNs or not, right? If you don't care about the time axis, you could always do something like

plot, data(where(finite(data)))

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Subject: Re: Completely omit NaNs from line plot  
Posted by [dg86](#) on Wed, 25 May 2016 18:48:19 GMT  
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On Wednesday, May 25, 2016 at 4:05:33 AM UTC-4, Mats Löfdahl wrote:

> Den onsdag 25 maj 2016 kl. 02:19:40 UTC+2 skrev laura...@gmail.com:

>> Hi,

```
>>
>> I have some solar irradiance data. All the nighttime values are set to NaN so that they won't
be used in any calculations. I would like to plot a section of the time series but not include any of
the points that are NaNs. That is, normally plot won't make any mark for the time when there is a
NaN, but I want to completely skip these points because they just make the plot twice as long as
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>> Thanks,
>>
>> Laura
>
> If you plot with time on the horizontal axis, the plot will be the same length whether you remove
the NaNs or not, right? If you don't care about the time axis, you could always do something like
>
> plot, data(where(finite(data)))
```

```
plot, data[where(finite(data))]
```

"modernized" the array notation to emphasize subscripting by where().

TTFN,

David

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Subject: Re: Completely omit NaNs from line plot  
Posted by [Markus Schmassmann](#) on Thu, 26 May 2016 08:39:06 GMT  
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On 05/25/2016 08:48 PM, David Grier wrote:

> On Wednesday, May 25, 2016 at 4:05:33 AM UTC-4, Mats Löfdahl wrote:

>> Den onsdag 25 maj 2016 kl. 02:19:40 UTC+2 skrev

>> laura...@gmail.com:

>>> I have some solar irradiance data. All the nighttime values are

>>> set to NaN so that they won't be used in any calculations. I

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>> same length whether you remove the NaNs or not, right? If you don't

>> care about the time axis, you could always do something like

> plot, data[where(finite(data))]

Mats' solution with David's better notation probably does what you want,  
although it does create an array without those points.

Id you really want to avoid that, try this:

```
time=make_array(n_elements(data),/ulong)
wf=where(finite(data),cnt)
time[wf]=ulindgen(cnt)
p=plot(time, data)
```

This also uses the plot function instead of plot procedure, the latter i would no longer use.

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Subject: Re: Completely omit NaNs from line plot  
Posted by [dg86](#) on Thu, 26 May 2016 09:30:56 GMT  
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On Thursday, May 26, 2016 at 4:39:12 AM UTC-4, Markus Schmassmann wrote:

> On 05/25/2016 08:48 PM, David Grier wrote:

>> On Wednesday, May 25, 2016 at 4:05:33 AM UTC-4, Mats Löfdahl wrote:

>>> Den onsdag 25 maj 2016 kl. 02:19:40 UTC+2 skrev

>>> laura...@gmail.com:

>>>> I have some solar irradiance data. All the nighttime values are

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> time=make\_array(n\_elements(data),/ulong)

> wf=where(finite(data),cnt)

> time[wf]=ulindgen(cnt)

> p=plot(time, data)

>

> This also uses the plot function instead of plot procedure, the latter i

> would no longer use.

If the goal is to omit the NaNs without leaving gaps in the plot, then the solution would be

```
time = findgen(n_elements(data))  
w = where(finite(data))  
p = plot(time[w], data[w])
```

This uses the indexes of the finite data points to select points from the time array that correspond to the valid data points.

Markus' proposed solution creates a time array consisting of consecutive times, which might not be what you want.

A simpler version of Markus' solution is

```
w = where(finite(data), count)  
time = findgen(count)  
p = plot(time, data[w])
```

All the best,

David

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